Pr	roject:	Shoreline Protection/Marsh Creation at Lake Borgne	В	oring:	1	
		DNR Contract No. 2503-03-15 PO-30		File:	02-115	
	For	State of Louisiana, Department of Natural Resources		Date:	12-Nov-02	
		c/o Sigma Consulting Group, Inc.	Techn	iician:	JH	
£	s	Undisturbed Sample	N 29°	57' 27.	90"	
Depth Feet	SAMPLES	Standard Penetration Test Classification Sample	W 89°	50' 48.	00"	
	SA	(SLS) Slickensided	Boring (Denth:	23 Feet	
- 0 -					201000	
	1	2 feet top of casing to top of barge deck				
		na k ong nagara ang kanangan a				
- 5 -		4 feet top of barge deck to water surface				
		2 feet water surface to mudline				
	000	=				
- 10 -		Very soft brown organic clay -				
		Very soft brown organic clay				
		Very soft brown organic clay				
- 15 -		Very soft brown organic clay				_
		Very soft brown peat				
- 20 -						-
		Very soft gray organic clay				- 1

- 25 -						1-
						1
						- 1
						-
_0 _						_
	100					
						-

Pi		Shoreline Protection/Marsh Creation at Lake Borgne DNR Contract No. 2503-03-15 PO-30 State of Louisiana, Department of Natural Resources c/o Sigma Consulting Group, Inc.	Boring: File: Date: Technician:	2 02-115 12-Nov-02 JH
Depth Feet	SAMPLES	Undisturbed Sample Standard Penetration Test Classification Sample (SLS) Slickensided	N 29° 57' 8.5 W 89° 50' 36 Boring Depth:	
- 0 -		2 feet top of casing to top of barge deck	boning capiti	421001
- 5 -	-4	4 feet top of barge deck to water surface 2 feet water surface to mudline		-
- 10 -		Very soft brown organic clay		
10		Very soft brown peat Very soft brown peat		
- 15 -		Very soft brown peat		-
		Very soft clay		
- 20 - - 25 -		Very soft gray slightly organic clay		
		Very soft gray slightly organic clay		
- 30 -		- Very soft gray slightly organic clay -		
		Very soft gray slightly organic clay		1-1
- 40 -		Very soft gray slightly organic clay		
- 45 -			*	

IAC-	Shoreline Protection/Marsh Creation at Lake Borgne DNR Contract No. 2503-03-15 PO-30 State of Louisiana, Department of Natural Resources c/o Sigma Consulting Group, Inc.	Boring: File: Date: Technician:	3 02-115 13-Nov-02 JH	
Depth Feet SAMPLES	Undisturbed Sample Standard Penetration Test Classification Sample (SLS) Slickensided	N 29° 56′ 38. W 89° 50′ 20 Boring Depth:		
- 0 -	2 feet top of casing to top of barge deck			
- 5 -	6 feet top of barge deck to water surface			-
- 10 -				=
- 15 - - 20 -	15 feet water surface to mudline			-
- 25 -	Very soft brown organic clay Very soft gray slightly organic clay			_
- 30 -	Very soft gray clay Very soft gray silty clay with 2 inch fine sand layer Firm gray clayer and with a grayin matter to see			53
- 35 -	Firm gray clayey sand with organic matter traces			_
- 40 -	Very soft gray slightly organic clay			(SLS)
- 45 -	Very soft gray silty clay	*		
- 50 -	Soft gray clay		627	

	LOG OF BORING		
Projec	t: Shoreline Protection/Marsh Creation at Lake Borgne	Boring:	3
	DNR Contract No. 2503-03-15 PO-30	File;	02-115
F	or: State of Louisiana, Department of Natural Resources	Date:	13-Nov-02
	c/o Sigma Consulting Group, Inc.	Technician:	JH
	Undisturbed Sample		
Depth Feet SAMPLES	Standard Penetration Test		
Sr. A	Classification Sample		
75	(SLS) Slickensided	Boring Depth:	73 Feet
- 50		± × ×	1,500,000
500	6.4		
	Soft gray slightly organic clay		
- 55 -	L		-
511	Soft gray slightly organic clay		
2000	+		
- 60 -			
00	A STATE OF THE STA		100 mg
$-\!$	Firm gray fine sand with silt traces	18 blows per foot (8/8/10)
	THE DESCRIPTION OF THE PROPERTY OF THE PROPERT		
- 65 -	Alternating layers of clay and fine sand		7-
-	Firm assurations and with about		
	Firm gray clayey sand with shells		
	Alternating layers of clay and sand		
- 70 -			ō
$ \times$	Dense gray clayey fine sand	34 blows per foot (10/17/17)
	Y	*****************************	***************************************
- 75 -			-
LINES TOOL			
			3 7 -
			Q. -
-		*	
			-

	LOG OF BORING	8		
Project	: Shoreline Protection/Marsh Creation at Lake Borgne	Boring:	4	
	DNR Contract No. 2503-03-15 PO-30	File:	02-115	
Fo	r: State of Louisiana, Department of Natural Resources	Date:	13-Nov-02	
	c/o Sigma Consulting Group, Inc.	Technician:	JH	
- 10	Undisturbed Sample	N 29° 56' 28.	02"	
Peet Feet SAMPLES	Standard Penetration Test	W 89° 49' 58		
SAM	Classification Sample		VX41	
	(SLS) Slickensided	Boring Depth:	43 Feet	
0 -	2 feet top of casing to top of barge deck			
	, , , , , , , , , , , , , , , , , , , ,			
	4 feet top of barge deck to water surface			
5 -				e -
	2 feet water surface to mudline			
10-	Very soft brown slightly organic clay			
10	Very soft brown peat			-
	Very soft brown peat			
15-	Very soft brown peat			-
	Very soft gray organic clay			
20 –				174
	Very soft gray clay with sand traces			
25 –				8
$=$ \times	Firm gray silty fine sand	12 blows per foot (5	5/6/6)	
30-				13
16	Firm gray silty fine sand			
35 -				-
$\overline{}$	Loose gray silty fine sand	6 blows per foot (2/	2/4)	
40 -				
	Loose gray clayey fine sand	O blows not feet (0)	4/E)	-
\rightarrow	acces gray adjoy into sailu	9 blows per foot (2/	4/5)	
-				
-				
				_

		LOG OF BORING			
F	roject	: Shoreline Protection/Marsh Creation at Lake Borgne	Boring:	5	
		DNR Contract No. 2503-03-15 PO-30	File:	02-115	
	Fo	r: State of Louisiana, Department of Natural Resources	Date:	14-Nov-02	
		c/o Sigma Consulting Group, Inc.	Technician:	JH	
		Undisturbed Sample	11 000 501 45		
Depth	LES	Standard Penetration Test	N 29° 56' 15.		
ă.	SAMPLES	Classification Sample	W 89° 49' 37	.92	
	(C)	(SLS) Slickensided	Baring Depth:	24 Feet	
- 0 -		Visit to a green cultivities a departument of the rest. Occur is not tree.	5- 300 m th 100 m th 100 m		
		2 feet top of casing to top of barge deck			
- 5 -	1	4 feet top of barge deck to water surface			
- 5 -					-
	1	3 feet water surface to mudline			- 1
- 10 -		Very soft brown slightly organic clay			
30000		7			
		Very soft brown organic clay			
20	蠿	Very soft gray slightly organic clay			
- 15 -	W	Firm gray silty fine sand with clay streaks			-
		Tim gray only into saila with day streaks			
- 20 -					1000
	\forall	Loose gray silty fine sand	7 blows per foot (3/	(0/4)	
	\sim	The state of the s	7 blows per root (3/	314) 	
- 25 -					-
-					
-					
-					150
					-
					- 1
			3 88		
					_
(V) S					-

Pro	oject	Shoreline Protection/Marsh Creation at Lake Borgne	Boring:	6	
		DNR Contract No. 2503-03-15 PO-30	File:	02-115	
	Fo	r: State of Louisiana, Department of Natural Resources	Date:	12-Nov-02	
	_	c/o Sigma Consulting Group, Inc.	Technician:	JH	
	us.	Undisturbed Sample	N 29° 52' 17.	24"	
Feet	SAMPLES	Standard Penetration Test	W 89° 41' 55		
	SAM	Classification Sample	VV 03 41 33	.02	
4 ه		(SLS) Slickensided	Boring Depth:	25 Feet	
		2 feet top of casing to top of barge deck			
5 -		5 feet top of barge deck to water surface			
		3 feet water surface to mudline			
0-		Very soft brown organic clay			
		Very soft brown organic clay			
5-		Very soft gray slightly organic clay			
		Very soft gray clay with organic matter			
		Very soft dark gray organic clay			
	\Box	N-0 14 1 10 10 10 10 10 10 10 10 10 10 10 10 1			
		Very soft gray clay with organic matter			
5-	T				- 71
\dashv					
	1				
-					
	-				
	1				
7	-				
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	1				
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				1.00	
-				180	
4					

F	roject:	Shoreline Protection/Marsh Creation at Lake Borgne	Boring:	7	
		DNR Contract No. 2503-03-15 PO-30	File:	02-115	
	For	State of Louisiana, Department of Natural Resources	Date:	12-Nov-02	
		c/o Sigma Consulting Group, Inc.	Technician:	JH	
1959	"	Undisturbed Sample	N 29° 51' 59.:	20"	
Depth	PLE	Standard Penetration Test	W 89° 40' 54.		
0-	SAMPLES	Classification Sample	2010F27 (SEE-17)25		
0	554	(SLS) Slickensided	Boring Depth:	45 Feet	
- 0 -		2 feet top of casing to top of barge deck			
- 5 -		5 feet top of barge deck to water surface			
		3 feet water surface to mudline			
- 10 -		Very soft brown organic clay			-
		Very soft brown organic clay			
- 15 -		Very soft brown peat			_
		Very soft brown organic clay			
- 20 -		Very soft brown peat			
20					
		Very soft brown organic clay			
- 25 -		- very son brown organic city			-
- 30 -		Very soft brown organic clay			
		Very soft gray slightly organic clay with sand lenses and sand streaks			
- 35 -			ę.		=
- 40		Very soft brown peat			
10					٦
		Very soft gray slightly organic clay	,		- 1
- 45 –		, 5, organic oray			
				2	
					-
					10-

F		Shoreline Protection/Marsh Creation at Lake Borgne DNR Contract No. 2503-03-15 PO-30 State of Louisiana, Department of Natural Resources	Boring; File: Date:	8 02-115 12-Nov-02	
Depth Feet	SAMPLES	c/o Sigma Consulting Group, Inc. Undisturbed Sample Standard Penetration Test	Technician: N 29° 51' 57. W 89° 40' 35	20.00	
- 0 -	SAM	Classification Sample (SLS) Slickensided	Boring Depth:	25 Feet	
		2 feet top of casing to top of barge deck			
- 5 -		6 feet top of barge deck to water surface			-
- 10 -	D. Nells	2 feet water surface to mudline			
		Soft gray slightly silty clay with organic matter Soft gray clay with sand streaks and 1 1/2 inch sand layer			
- 15 -		Soft gray organic clay			
		Very soft gray slightly organic clay			
- 20 -		Very soft gray clay with shells			-
- 25 -		Soft gray slightly organic clay			
-					-
			a		
				12	
-					

Fo	DNR Contract No. 2503-03-15 PO-30	File:	02-115
PC	- STREET OF LIGHTED A LIGHTED AND AND AND WALL LANGUISAGE	Date:	14-Nov-02
	or: State of Louisiana, Department of Natural Resources c/o Sigma Consulting Group, Inc.	Technician:	JH
25.00	Undisturbed Sample	N 29° 52' 01.	40"
SAMPLES	Standard Penetration Test	W 89° 40' 17.	
SAME	Classification Sample		
1	(SLS) Slickensided	Boring Depth:	47 Feet
	2 feet top of casing to top of barge deck		
	4 feet top of barge deck to water surface		
ST			
	6 feet water surface to mudline		
)-	o lost fraisi surface to madimo		
	Very soft gray clay with organic matter and shells		
-	Soft gray slightly sandy clay with sand streaks, organic matter	, and shells	
	Very soft gray clay with organic matter		
	Very soft gray clay with 2 inch fine sand layer		
)-	Firm gray fine sand		
	Soft gray clay with 3 inch organic clay layer		
-	Son gray olay mino inch organic clay layer		
	Soft gray slightly organic clay		
5-	Soft gray slightly silty clay with 3 inch fine sand layer, organic	matter, and shells	
	Soft gray clay with silt lenses		
	- Con gray only with all lendes		
5		of a	
	Soft gray clay with silt lenses		

	ct: Shoreline Protection/Marsh Creation at Lake Borgne DNR Contract No. 2503-03-15 PO-30 for: State of Louisiana, Department of Natural Resources c/o Sigma Consulting Group, Inc.	Boring: 10 File: 02-115 Date: 11-Nov-02 Technician: JH	
O Pepth Feet	Undisturbed Sample Standard Penetration Test Classification Sample (SLS) Slickensided 2 feet top of casing to top of barge deck	N 29° 51' 50.63" W 89° 39' 49.78" Boring Depth: 22 Feet	
5 -	4 feet top of barge deck to water surface 2 feet water surface to mudline		
10-	Very soft gray slightly organic clay Very loose gray shells with sand traces Very loose gray sand with shells and silt traces Loose gray shells and sand with silt traces Loose gray shells with sand traces	2 blows per foot (1/1/1) 2 blows per foot (1/1/1) 3 blows per foot (1/2/1) 4 blows per foot (1/2/2)	2
5-	Loose gray clayey sand with organic matter	9 blows per foot (6/4/5)	
			-
		*	-

F	rojec	Shoreline Protection/Marsh Creation at Lake Borgne DNR Contract No. 2503-03-15 PO-30	Boring: File:	11 02-115	
	Fo	or: State of Louisiana, Department of Natural Resources	Date:	11-Nov-02	
5 H	ES	c/o Sigma Consulting Group, Inc. Undisturbed Sample Standard Penetration Test	Technician: N 29° 51' 41.3	JH 7*	
Depth Feet	SAMPLES	Standard Penetration Test Classification Sample (SLS) Slickensided	W 89° 39′ 19.4	15"	
0 -		2 feet top of casing to top of barge deck	Boring Depth:	44 Feet	
5 -		4 feet top of barge deck to water surface			
		3 feet water surface to mudline			
10-		Very soft gray clay with organic matter			
		Firm gray slightly organic silt with clay traces Firm gray sandy silt			
15-		Very soft gray slightly silty clay			
20 –		Very soft gray organic clay			
25 –		Very soft brown peat			
80 –		Soft gray very silty clay			
35 –		Firm gray clayey fine sand			
10 -	X	Loose gray silty fine sand	6 blows per foot (2/2/	4)	
		Soft gray clay			(SLS)
5-			***************************************	***************************************	(3L3)
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	ect: Shoreline Protection/Marsh Creation at Lake Borgne	Boring:	12	
DNR Contract No. 2503-03-15 PO-30 For: State of Louisiana, Department of Natural Resources		File: Date:	02-115 14-Nov-02	
	c/o Sigma Consulting Group, Inc.	Technician:	JH	
	Undisturbed Sample	N 29° 56' 9.7	8"	
Feet	Standard Penetration Test Classification Sample	W 89° 49' 27.06"		
	Classification Sample (SLS) Slickensided	Radas Bastle	45 Feet	
o +	1950) GIRKHINIOU	Boring Depth:	45 reet	
	2 feet top of casing to top of barge deck			
	6 feet top of barge deck to water surface			
5 -	In St			
0 -	2 feet water surface to mudline			
	Soft gray clay with shells			
	Medium gray clay			
5-	Soft gray clay with silt streaks			(SL
	Soft tan silty clay			
20	Soft gray clay			
.0				
25	Very loose gray clayey fine sand	2 blows per foot (2/1/1)		
30	Loose gray clayey fine sand	5 blows per foot (2/2/3)		
35	Firm gray clayey fine sand	14 blows per foot (10/5/9)		
10	Firm gray clayey fine sand	28 blows per foot (12/13/15)	
15	Very dense gray silty fine sand with clay traces	69 blows per foot (27/30/39)	*******

Geotechnical Engineers